

### Amendments

Applicants have amended claims 1, 22, 24, 25, 26, 28 and 29 to include the limitation “wherein the mammal has metastatic lymphoma.” This amendment is supported in the specification at, *e.g.*, page 7, lines 4-6.

Applicants have further amended claims 25, 26, 28 and 29 to delete the recitation of “metastatic” from the preamble of these claims. The above amendment adding the limitation “wherein the mammal has metastatic lymphoma” renders the use of the word “metastatic” in the preamble redundant.

None of these amendments adds new matter, and applicants respectfully request that the amendments be entered.

### REMARKS

Applicants respectfully request reconsideration of this application in view of the foregoing amendments and the following remarks.

Applicants gratefully acknowledge Examiner’s statement that claims 4-5 are free of the prior art of record.

### Rejections Under § 102(b)

Certain of the currently pending claims stand rejected under 35 U.S.C. § 102(b) in view of several references that show the use of IVIG in treating secondary infections in patients who also have lymphoma. None of the cited references, however, indicate that the lymphoma was metastatic or capable of metastasis. Each of applicants’ pending claims, as amended, requires a mammal having metastatic lymphoma. Such methods are not inherently performed by the cited prior art.

Chapel et al.

The Examiner has rejected claims 1-2, 7-9 and 25-28 under 35 U.S.C.

§ 102(b) based on Chapel et al.\* The Examiner contends that the administration of IVIG in Chapel et al. inherently inhibits the metastasis of the lymphoma. Applicants traverse.

As applicants have stated previously, there is no indication in Chapel et al. that the lymphoma in question was of a metastatic nature -- nothing about metastasis in this study can be inferred one way or the other.

The Examiner has asserted that “even mammals with non metastasizing non-Hodgkins lymphoma were ‘inhibited’ from metastasizing by the administration of IVIG. The fact of whether or not metastasis occurred or could have potentially occurred is irrelevant, in view that in each scenario, metastasis is inhibited because of the presence of IVIG” and “each mammal with a lymphoma had its metastatic potential inhibited simply by receiving IVIG as claimed.”

Applicants respectfully disagree that the fact of whether or not metastasis occurred is irrelevant, particularly in view of the amended claims. Metastatic lymphoma is now an explicit limitation in the body of the amended claims. Each prior art reference cited under § 102(b) must be shown to meet this claim limitation. Chapel et al. does not meet this claim limitation, expressly or inherently, because it cannot be shown that the patients in Chapel et al. had metastatic lymphoma.

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Chapel et al., “A Crossover Study Of The Use Of Intravenous Immunoglobulin For Prophylaxis Against Infection In Patients With Chronic Lymphocytic Leukemia Or Low Grade Non-Hodgkins Lymphoma,” Clin. Res. 36, pp. 407A (1988).

Each of the prior art references cited by the Examiner for anticipation only show IVIG treatment of secondary infections or symptoms **other** than metastasis of lymphoma. There is no disclosure in the cited references of the use of IVIG in patients with metastatic lymphoma.

The cited references, therefore, do not explicitly disclose every limitation of the claimed invention. Nor do the cited references inherently disclose inhibition of metastasis of lymphoma or treatment of metastatic lymphoma, because the assumption cannot be made that the lymphoma described in the cited references was metastatic as of the time of administration of IVIG.

Thus, applicants respectfully request that the Examiner withdraw the rejection of claims 1-2, 7-9 and 25-28 based on Chapel et al. under 35 U.S.C. § 102(b).

Morell et al.

The Examiner has rejected claims 1-3, 7-11, 25 and 28 under 35 U.S.C. § 102(b) based on Morell et al.\* Applicants traverse.

Like Chapel et al., Morell et al. does not provide any evidence that metastatic lymphoma was present at the time of IVIG administration. For all of the reasons set forth above regarding the deficiency of the evidence supporting a case of inherent anticipation by Chapel et al., Morell et al. does not anticipate the pending claims.

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A. Morell and S. Barandun, "Prophylactic and Therapeutic Use of Immunoglobulin for Intravenous Administration in Patients with Secondary Immunodeficiencies Associated with Malignancies," Pediat. Infect. Dis. J. 7, pp. S87-S91 (1988).

Thus, applicants respectfully request that the Examiner withdraw the rejection of claims 1-3, 7-11, 25 and 28 based on Morell et al. under 35 U.S.C. § 102(b).

Besa et al.

The Examiner has rejected claims 1-3, 6-9 and 25-28 under 35 U.S.C. § 102(b) based on Besa et al.\* Applicants traverse.

Like Chapel et al. and Morell et al., Besa et al. does not provide any evidence that metastatic lymphoma was present at the time of IVIG administration. For all of the reasons set forth above regarding the deficiency of the evidence supporting a case of inherent anticipation by Chapel et al., Besa et al. does not anticipate the pending claims.

Thus, applicants respectfully request that the Examiner withdraw the rejection of claims 1-3, 6-9 and 25-28 based on Besa et al. under 35 U.S.C. § 102(b).

Vitetta et al.

Claim 29 remains rejected under 35 U.S.C. § 102(b) in view of Vitetta et al. The Examiner asserts that Vitetta et al.\*\* administered immunoglobulin to lymphoma patients intravenously, thereby anticipating the claimed invention. Applicants traverse.

The antibody fragments in Vitetta et al. are not the claimed IVIG fragments. The critical difference between the IVIG fragments of claim 29 and the Fab'

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Besa et al., Am. J. Med. 84, pp. 691-698 (1988).

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Vitetta et al., Cancer Research, Vol. 51, pp. 4052-4058 (1991).

fragments of Vitetta et al. is the source. In Vitetta et al. the fragments are made from a monoclonal antibody of unique specificity. This is very different from Fab' fragments of IVIG, which retain the broad specificity of the total serum globulin fraction from which these fragments are derived. This important difference was known to one of skill in the art as of the filing date based on the disclosure in the specification and the commercial availability of IVIG fragments. (See, *e.g.*, specification at page 5, lines 5-19 and page 6, lines 1-4).

In summary, Vitetta et al. does not anticipate the instant invention because no fragment of IVIG was used in the study. Applicants therefore respectfully request that the Examiner withdraw the rejection of claim 29 based on Vitetta et al. under 35 U.S.C. § 102(b).

#### Double Patenting

Claims 1-11 and 22-29 remain rejected as unpatentable over issued claims 1-18 of U.S. patent 5,965,130 and issued claims 1-10 of U.S. patent 5,562,902 under the obviousness-type double patenting doctrine. Applicants remain ready to submit a terminal disclaimer in compliance with 37 C.F.R. § 1.321(c) upon an indication by the Examiner that all other rejections are withdrawn.

#### Rejection Under 35 U.S.C. § 112, second paragraph

Pending claims 22-29 remain rejected under 35 U.S.C. § 112, second paragraph as being “indefinite in the recitation of ‘method for treating.’” Applicants traverse.

The Examiner asks, based on the dictionary definition provided previously by applicants, *i.e.*, “[t]o give medical aid to counteract (a disease or condition)<sup>1</sup>,” what is being counteracted? Applicant respectfully submits that the cancerous condition of lymphoma is being counteracted. When read in light of the specification, as required under MPEP § 2173.02, “treatment” had a clear meaning to one of skill in the art as of the filing date. The specification at page 1, line 4 refers to “treatment of primary cancerous tumors,” and the Figures of the patent depict the results of the claimed methods of treatment, namely, longer mean survival time for mice (Figure 1), inhibition of proliferation of lymphoma cells (Figure 2) and induction of apoptosis in lymphoma cells (Figure 3).

Thus, the results of administration of IVIG according to the claimed methods of treatment may result in many of the effects listed by the Examiner (*e.g.*, tumor regression, reduction of pain and amelioration of symptoms). In the context of the specification, the term “treatment” clearly refers to its ordinary meaning of giving medical aid to counteract the cancerous condition of lymphoma. The MPEP standard is that the Examiner “should allow claims which define the patentable subject matter with a reasonable degree of particularity and distinctness. Some latitude in the manner of expression and the aptness of terms should be permitted even though the claim language is not as precise as the Examiner might desire.” MPEP § 2173.02. (emphasis in original).

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<sup>1</sup> The American Heritage Dictionary, 3d Ed., Houghton Mifflin Co.:Boston, p. 1906 (1996).

Furthermore, many other cancer treatment modalities were known in the art as of the filing date of the instant application, including surgery, chemotherapy, radiation therapy and immunotherapy. (*See, e.g.*, specification page 7, lines 11-24). One of skill in the art understood that these methods of treatment, as with the claimed methods of treatment and consistent with the ordinary dictionary definition, were intended to counteract cancerous conditions.

In view of the above remarks, applicants respectfully request that the Examiner withdraw the rejection of claims 22-29 under 35 U.S.C. § 112, second paragraph.

#### Conclusion

For all of the above reasons, applicants submit that each of the pending claims are now in condition for allowance and request that this application be passed to issue. However, if the Examiner believes that an interview would facilitate the resolution of any outstanding issue, the Examiner is kindly requested to contact the undersigned.

Respectfully submitted,



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